## **ABSTRACT**

Method, apparatus, and program means for rearranging data between multiple registers. The method of one embodiment comprises shuffling first set of packed data from a first source based on a first set of masks to produce a first set of shuffled data. The first set of masks is to include a first plurality of control entries to set designated data element positions in the first set of shuffled data to zero. A second packed data from a second source is shuffled based on a second set of masks to produce a second set of shuffled data. The second set of masks includes a second plurality of control entries to set to zero data element positions in the second set of shuffled data opposite to said designated data element positions in the first set of shuffled data. The first set of shuffled data and said second set of shuffled data are merged together to form a packed data resultant.